

Applicant: Vladimir Bulovic
Application No.: 10/693,022

REMARKS/ARGUMENTS

After the foregoing Amendment, Claims 1, 7, 8, 12, 14, 16-18, 20, 21, 29-42 and 43 are currently pending in this application. Claims 29, 33, 36, and 39 have been amended to more distinctly claim subject matter which the Applicant regards as the invention. New claim 43 has been added. Applicants submit that no new matter has been introduced into the application by these amendments.

Claim Rejections - 35 USC §112, second paragraph

Claims 33-42 stand rejected under 35 USC §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claims 33, 36 and 39 have been amended to more distinctly claim subject matter which the Applicant regards as the invention. Applicant respectfully requests withdrawal of the rejection.

Based on the arguments presented above, withdrawal of the 35 USC §112, second paragraph rejection of claims 33-42 is respectfully requested.

Claim Rejections - 35 USC §103(a)

Claims 1, 7-8, 13-14, 16-17 and 20

Claims 1, 7-8, 13-14, 16-17 and 20 stand rejected under 35 USC §103(a) as being unpatentable over Tamura et al. (US 2002/0130326) in view of Yuyama et al. (US 6,069,676).

Claim 1 relates to an array. Claim 1 recites the features of a plurality of light emitting devices disposed on a transparent substrate, the transparent substrate having an upper surface that contacts the light emitting device, a lower surface distal from the light emitting device and a plurality of side surfaces, each of the side surfaces being substantially perpendicular to the upper surface, and at least one photodetector arranged on the lower surface of the transparent substrate for detecting light emitted from the light emitting devices.

Claim 14 relates to a method for forming an array, comprising forming a plurality of light emitting devices disposed on a transparent substrate, said transparent substrate having an upper surface contacting the light emitting device, a lower surface distal from the light emitting device and at least one side surface substantially perpendicular to said upper surface of the transparent substrate; and forming a photodetector at the lower surface of the transparent substrate for detecting light emitted through the transparent substrate.

Applicant initially notes that neither Tamura nor Yuyama discuss OLEDs or organic LEDs although the Office Action at paragraphs 7 and 8 make such statements. Withdrawal of such statements is respectfully requested.

Tamura, as pointed out in the Office Action at paragraph 7, does not position a photodetector on a lower surface of the substrate. This deficiency is not cured by the teachings of Yuyama as clearly stated in the background of the Tamura reference at Column 3, line 49 – Column 4, line 8, which identifies the issues with Yuyama (Applicant notes that JP 10(1998)-49074A is the foreign priority document and that Yuyama originally published on February 20, 1998). In view of these identified deficiencies of the Yuyama reference, it would not have been obvious to one of ordinary skill in the art to incorporate the teachings of Yuyama into the invention of Tamura as stated at paragraph 7 since Tamura specifically rejects the Yuyama approach.

Moreover, as pointed out in paragraph 7, Tamura discloses that "[t]he photodetectors are positioned in a vast array of locations by Tamura including on the same surface (fig. 2b), on the side of the substrate (fig. 3b), and even below [. . .] (fig. 4b)." Tamura knowing Yuyama did not place any photodetectors on the lower surface of the substrate as recited in claims 1 and 14. It would not be "natural" or "predictable" to combine Tamura and Yuyama after consideration of all the known facts.

As stated in the U.S. PAT. & TRADEMARK OFFICE, U.S. DEPT OF COMMERCE, MANUAL OF PATENT EXAMINING PROCEDURE § 1302.12 (8th ed., Last Rev. July 2008) [hereinafter MPEP], § 2141 Examination Guidelines for

Determining Obviousness Under 35 U.S.C. § 103, “the focus when making a determination of obviousness should be on what a person of ordinary skill in the pertinent art would have known at the time of the invention, and on what such a person would have reasonably expected to have been able to do in view of that knowledge.” One of ordinary skill in the art would reasonably conclude that the methods taught by Yuyama would not work for the same reasons stated by the primary reference Tamura in its’ background. There would be no rational reason for combining Tamura and Yuyama in view of these known problems.

The motivation for combining Tamura and Yuyama as stated in paragraph 13, page 6 is also found to be deficient in view of the above. Moreover, as Tamura states in its' background, "this [the Yuyama] method is easily applicable to devices such as a color display device whose light quantity is relatively small, but cannot be simply applied to devices such as a lighting device to which the present invention relates." There is simply no reason to combine the references as suggested in the Office Action.

Claims 7, 8 and 13 are dependent upon claim 1, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above.

Claims 16, 17 and 20 are dependent upon claim 14, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above.

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Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claims 1, 7-8, 13-14, 16-17 and 20 is respectfully requested.

Claims 12 and 21

Claims 12 and 21 stand rejected under 35 USC §103(a) as being unpatentable over Tamura in view of Yuyama and further in view of Yamazaki et al. (US 6,424,326).

Claim 12 is dependent upon claim 1 and claim 21 is dependent upon claim 14, which the Applicant believes are allowable over the cited prior art of record for the same reasons provided above. Yamazaki does not cure the deficiencies stated with respect to the alleged combination of Tamura and Yuyama.

Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claims 12 and 21 are respectfully requested.

Claim 18

Claim 18 stands rejected under 35 USC §103(a) as being unpatentable over Tamura in view of Yuyama and further in view of Cok (US 7,026,597).

Claim 18 is dependent upon claim 14, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above. Cok does not cure the deficiencies stated with respect to the alleged combination of

Tamura and Yuyama. Moreover, Cok teaches measuring ambient light with photodetectors. Any combination, even if proper, would not result in side mounted photodetectors for measuring the emitted light of light emitting devices as recited in claim 18.

Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claim 18 is respectfully requested.

Claims 29-31 and 33-34

Claims 29-31 and 33-34 stand rejected under 35 USC §103(a) as being unpatentable over Henmi et al. (US 7,154,492) in view of Yuyama.

Henmi, as pointed out in the Office Action at paragraph 16, does not position photodetectors on an opposite surface of the transparent substrate. This deficiency is not and can not be cured by the teachings of Yuyama as any such combination would be improper. Henmi states that "[t]he inventors of this application have the knowledge of that, by measuring the totally reflected amount of light by adopting several means such as those described later, it is possible to grasp the instantaneous luminance of the EL element in the luminescent display panel." Henmi is clearly measuring the total reflected light. All of the Henmi photodetectors are therefore mounted as described and shown in the Henmi patent

to measure totally reflected light. Photodetectors on a surface opposite that of the transparent substrate measures emitted light as recited in claims 29 and 33.

In view of the particular structure identified in Henmi, it would not have been obvious to one of ordinary skill in the art to incorporate the teachings of Yuyama into the invention of Henmi. It would not be “natural” or “predictable” to combine Henmi and Yuyama after consideration of all the known facts. One of ordinary skill in the art would reasonably conclude that the methods taught by Yuyama would not work in view of the Henmi structure. There would be no rational reason for combining Henmi and Yuyama in view of these failings.

In addition, the reasons presented in the Tamura reference are also applicable to the alleged combination of Henmi and Yuyama. Moreover, at the time Henmi was filed, the Yuyama reference was published and yet the photodetectors were not placed on the lower surface as suggested by the Office Action. It would not be “natural” or “predictable” to combine Henmi and Yuyama after consideration of all the known facts.

Claims 30 and 31 are dependent upon claim 29, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above.

Claim 34 is dependent upon claim 33, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above.

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Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claims 29-31 and 33-34 is respectfully requested.

Claim 32 and 35

Claims 32 and 35 stand rejected under 35 USC §103(a) as being unpatentable over Henmi in view of Yuyama and further in view of Yamazaki et al. (US 6,424,326).

Claim 32 is dependent upon claim 31 and claim 35 is ultimately dependent on claim 33, which the Applicant believes are allowable over the cited prior art of record for the same reasons provided above. Yamazaki does not cure the deficiencies stated with respect to the alleged combination of Henmi and Yuyama.

Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claims 32 and 35 is respectfully requested.

Claims 36-37

Claims 36-37 stand rejected under 35 USC §103(a) as being unpatentable over Henmi in view of Yuyama and further in view of Hunter (US 6,356,029). Claim 36 is similar to claim 29, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above. Hunter does not cure

the deficiencies stated with respect to the alleged combination of Henmi and Yuyama.

Claim 37 is dependent upon claim 36, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above.

Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claims 36-37 is respectfully requested.

Claim 38

Claims 38 stands rejected under 35 USC §103(a) as being unpatentable over Henmi in view of Yuyama and Hunter and further in view of Yamazaki.

Claim 38 is dependent upon claim 37, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above. Yamazaki does not cure the deficiencies stated with respect to the alleged combination of Henmi, Yuyama and Hunter.

Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claim 38 is respectfully requested.

Claims 39-40 and 42

Claims 39-40 and 42 stand rejected under 35 USC §103(a) as being unpatentable over Henmi in view of Yuyama and further in view of Bawendi (US

6,501,091). Claim 39 is similar to claim 29, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above. Bawendi does not cure the deficiencies stated with respect to the alleged combination of Henmi and Yuyama.

Claims 40 and 42 are dependent upon claim 39, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above.

Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claims 39-40 and 42 are respectfully requested.

Claim 41

Claim 41 stands rejected under 35 USC §103(a) as being unpatentable over Henmi in view of Yuyama and Bawendi and further in view of Yamazaki.

Claim 41 is ultimately dependent upon claim 39, which the Applicant believes is allowable over the cited prior art of record for the same reasons provided above. Yamazaki does not cure the deficiencies stated with respect to the alleged combination of Henmi, Yuyama and Bawendi.

Based on the arguments presented above, withdrawal of the 35 USC §103(a) rejection of claim 41 is respectfully requested.

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Claim 43

New claim 43 clarifies that the light emitting diodes are independently controlled. The cited references discuss maintaining a color balance or white balance which requires jointly controlling the voltage of the light emitting diodes. Applicant respectfully requests allowance of claim 43.

Conclusion

If the Examiner believes that any additional minor formal matters need to be addressed in order to place this application in condition for allowance, or that a telephone interview will help to materially advance the prosecution of this application, the Examiner is invited to contact the undersigned by telephone at the Examiner's convenience.

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In view of the foregoing amendment and remarks, Applicants respectfully submit that the present application, including claims 1, 7-8, 12-14, 16-18, 20-21, and 29-42, is in condition for allowance and a notice to that effect is respectfully requested.

Respectfully submitted,

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